IUCN UK Peatland Programme
c/o Royal Society of Wildlife Trusts,
The Kiln,
Waterside,
Mather Road,
Newark,
Nottinghamshire,
NG24 1WT

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IUCN UK Peatland Programme response to the 'Peatlands and Renewable Energy' position paper

Dear Renewables UK Cymru (RUKC) and Dr. Andy Mills,

The position statement published by RUKC[1] warrants a direct and public response because it is likely to be widely read and there are several flaws in the evidence presented that the IUCN UK Peatland Programme felt necessary to rebut.

The International Union for Conservation of Nature (IUCN) supports the large-scale expansion of wind energy as vital for a sustainable, low-carbon future. However, even 'clean' energy sources can have significant unintended impacts on the environment. A truly sustainable green energy transition must therefore be carefully planned and managed so that it does not come at an unacceptable cost to nature[2].

Recent development approvals in Wales on peatland have highlighted the delicate balancing act of policy application when implementing policies to both promote green energy and to promote peatland conservation. Compromising the 'green' of green energy by placing it on peatlands is both irresponsible and short-sighted; physically removing habitat and the services to society which those peatlands provide and undermining globally important climate and biodiversity targets.

[1] Why treating all peatlands as 'irreplaceable' risks Welsh climate and nature ambitions
[2] Mitigating biodiversity impacts associated with solar and wind energy development | IUCN Library System

I would like to take the opportunity to draw your attention to two recent briefings published by the IUCN UK Peatland Programme which are of particular relevance to this topic:

- Peatlands and Development briefing
- Tracks and Roads on peatlands

Planning definitions and 'irreplaceable'

The position statement says that peatlands are a 'relatively common' habitat in the UK: whilst this is accurate, it neglects to point out that blanket peatlands are globally rare and the UK is home to around 15% of the global total extent.

The paper argues that peatlands cannot be considered irreplaceable because they can be restored. This is a logical fallacy: something can be restorable yet still irreplaceable if lost. A Da Vinci painting can undergo restoration, but if it is destroyed it cannot be replaced. The paper then contradicts itself, later stating that highly degraded peat should be prioritised for development *because* it is unrestorable. But if a peatland is unrestorable, then by the paper's own reasoning it should in fact *be considered irreplaceable*. This internal inconsistency undermines one of the central arguments presented here.

We would support Welsh Government's PPW 12[3] Chapter 6's definition of 'irreplaceable' in the peatland context:

> *"Habitats, including the natural resources which underpin them, which would be technically very difficult (or take a very **significant time**) to restore, **recreate** or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. Examples include wet woodlands… peatland, …blanket bog…and lowland fen."*

In the context of the climate and nature crisis – which has been formally recognised by Welsh Government - we would seek to see this PPW 12 statement strengthened further in relation to the terms 'significant time' and 'recreate':

- **Significant time:** Despite the suggestion in the RUKC briefing, studies have shown *it does* take a significant time to recover peatland habitats[4]: whilst vegetation can recover rapidly on the surface, and while restoration is found to be effective for some ecosystem services, the science around full restoration of

[3] Planning Policy Wales - Edition 12
[4] Restoration of formerly afforested blanket bog: Estimating time for vegetation recovery - Rydgren - 2025 - Ecological Applications - Wiley Online Library

ecosystem function is still evolving. Restoration intervention success can vary by site[5].

- **Recreate:** Similarly to fossil fuels which are considered irreplaceable on a human timeframe, peat also accumulates very slowly (published literature widely cites 1mm per year accumulation[6]) and so the ecosystem cannot be recreated quickly enough to be considered replaceable. The finite nature of peat and peatland habitats - which are inextricably linked to one another - therefore defines these ecosystems as irreplaceable once lost. There is ecological value in wetland creation schemes in creating the conditions that precede peat formation as this is of benefit to many wetland pioneer species. But creating a fully functioning peatland ecosystem from scratch is not possible in a timescale which is relevant to the current climate and nature crises.

The paper may advocate for the construction of windfarms on shallow or degraded peat, but it notably does not rule out construction on deeper peats. This directly undermines Welsh Government commitments to increase peatland restoration. The paper also fails to mention research led by Prof. Jo Smith which finds that the payback time on the emissions often exceeds the lifetime of the windfarm, thus the damage incurred to the peat will not be offset by the windfarm[1,2,3]. A simplified discussion of the carbon losses due to peatland damage through development versus the carbon benefits of renewable energy production also ignores the wider ecosystem service delivery of peatlands - even degraded peatlands provide a refuge for vulnerable species. In good health, the role of peatlands in water provision, flow regulation and recreation are critical to consider when assessing development impacts.

Ecological understanding of peatlands and peatland condition

Without the transparency of individual attributable authorship (other than the named lead author) it is difficult to test the assertion that 'expert peatland ecologists' or peatland hydrologists were consulted in drafting this document. A number of unevidenced claims are made throughout the document which also highlight the lack of a thorough ecological or peatland systems understanding by the authors:

- With respect to hydrology;
    - The lack of hydrological consideration is apparent in the position statement – and a previous paper has also pointed out this issue with respect to claims made by developers[10]. Highly relevant research, such

[5] Restoration of blanket peatlands - ScienceDirect
[6] e.g. Climate and water-table levels regulate peat accumulation rates across Europe | PLOS One

as the publications of Saraswati and Strack from North America, are not considered in the position statement but are highly relevant to the hydrological and biogeochemical processes discussed[11,12].

- The paper states that habitats are not 'spatially defined', which misses the crucial point that by spatially defining them, there is a risk of placing them in isolation from one another and failing to recognise the importance of hydrological integrity to the health of the mosaic.

- There are also issues with the interpretation of the NVC mire categories. The report suggests that M categories 1-3 and 17-19 are the 'highest quality mire types', with the exception of M20 which is considered to be a more degraded habitat. This interpretation is incorrect because there is no linkage to degradation inherent in NVC categories alone. Condition is not something that is indicated solely by botanical composition and assessments should be made based on several factors including physical features, knowledge about past and current management and other variables that impact a habitat's trajectory. The mire types M15 and 16 are noted to be considered as 'priority habitats' in Scotland and this briefing does not adequately capture that these sites are considered by the JNCC to be of international importance and globally rare[7]. While both M15 and 16 *can* indicate degraded blanket bog when growing over deep peat, some are natural wet heaths of high biodiversity value. These mosaic upland wet heath, bog areas and flushes are also known to be important water vole habitats, with recent colonies found in key upland areas of South Wales[8] and so are critical for supporting threatened biodiversity.

Monitoring and evidence

There are known limitations with the assessment of the impacts of wind energy on peat. Because of the slow nature of formation of peatland habitats, sometimes the impacts of pressures can also be slow to respond and therefore difficult to observe and quantify within a lifetime or within the timeframe of an EIA. The long-term impacts of drains, tracks and other elements of disturbance within a wind farm development are rarely studied or monitored correctly but we know from studies of peatland functional response to pressure that negative impacts on the habitat can be wide ranging[7]. Impacts are often considered in isolation with their effects on vegetation, soil, waste generation (through soil excavation) and hydrology all considered individually, rather than being drawn together to make any meaningful assessment of impact on the ecosystem function as a whole.

[7] https://uel-repository.worktribe.com/output/476616/the-ecosystem-approach-in-ecological-impact-assessment-lessons-learned-from-windfarm-developments-on-peatlands-in-scotland

The environmental precautionary principle is a risk management approach where, in the face of potential but uncertain environmental or public harm, proactive and cost-effective measures are taken to prevent degradation even without full scientific certainty. It encourages preventative action and shifts the burden of proof to those proposing a potentially harmful activity such as development on a sensitive habitat.

No new evidence is brought to bear in this publication and indeed this has become a sticking point of the debate. If we are to work together to identify a collective way forwards then the renewables industry should assist in improving the knowledge base; studies on the impacts of development on peatland and the effectiveness of peatland rehabilitation through putting in place *appropriate* scientific monitoring and through the sharing of data with other stakeholders is still needed. Monitoring should be co-designed with expert peatland ecologists, hydrologists and soil scientists to ensure all elements of the peatland ecosystem are considered and understood.

Responsible development design

Cumulative impact is often not considered for peatlands. Arbitrary boundaries for EIA scoping areas do not consider functional peatland boundaries (e.g. macrotopes[8]) and therefore one cannot equate the impact of the development squarely with the predicted impact on the peatland. No one is accounting for the lost emissions mitigation potential through restoring degraded peat without development.

The paper also touched on the reuse of peat removed in excavation, and whilst it cites the recent ClimateXChange research[9], it fails to address the three headline issues that were discussed in this research, namely:

- **Issue 1:** Avoidance of peat excavation. As a critical first step to protect peatland, biodiversity, and maintain water cycle connectivity, peat excavation must be minimised.
- **Issue 2:** Preparation and planning issues. Site surveys often lack the requisite detail to effectively avoid deep peat areas during construction, leading to problems with removal of greater volumes of peat than expected that require reuse.
- **Issue 3:** Carbon storage. Accurate carbon calculations are needed to fully understand the impact of the wind farm. However, this study found that more peat is often excavated than planned, highlighting the need for greater accuracy in carbon excavation measurements.

[8] Macrotope: largest functional unit of a peatland which takes into account an understanding of its hydrological boundaries as well as ecology.
[9] Investigating the reuse of excavated peat on wind farm development sites | ClimateXChange

Financing

Comments made around private finance in the paper make it seem like finance from developers is the only source of private funding. We know from experience across the UK that this is not the case, and in fact legally binding duties to restore, linked to planning permission, can hinder the availability of private finance from other sources such as the Peatland Code[10].

Whilst we acknowledge that the paper was not commissioned by RUKC and remains the views of its authors (which is largely undisclosed and hidden behind organisational attribution) it has been promoted and shared by RUKC through social media and its website. Therefore, we would invite a response from RUKC and/the lead author to this letter as well as welcoming dialogue directly with the other authors themselves.

Yours sincerely,

Dr Emma Hinchliffe

Director, IUCN UK Peatland Programme

[10] Restoration which is legally mandated elsewhere e.g. through planning conditions, means that the restoration will not meet the legal additionality test for the Peatland Code and private finance through voluntary carbon market routes will be blocked.